FIG. 1

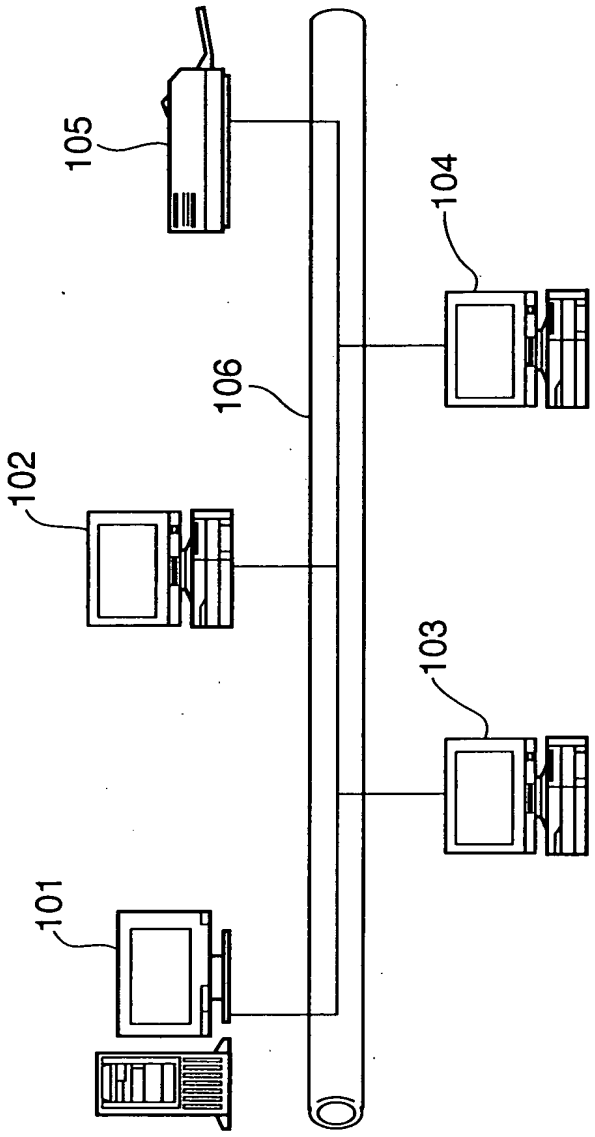


FIG. 2

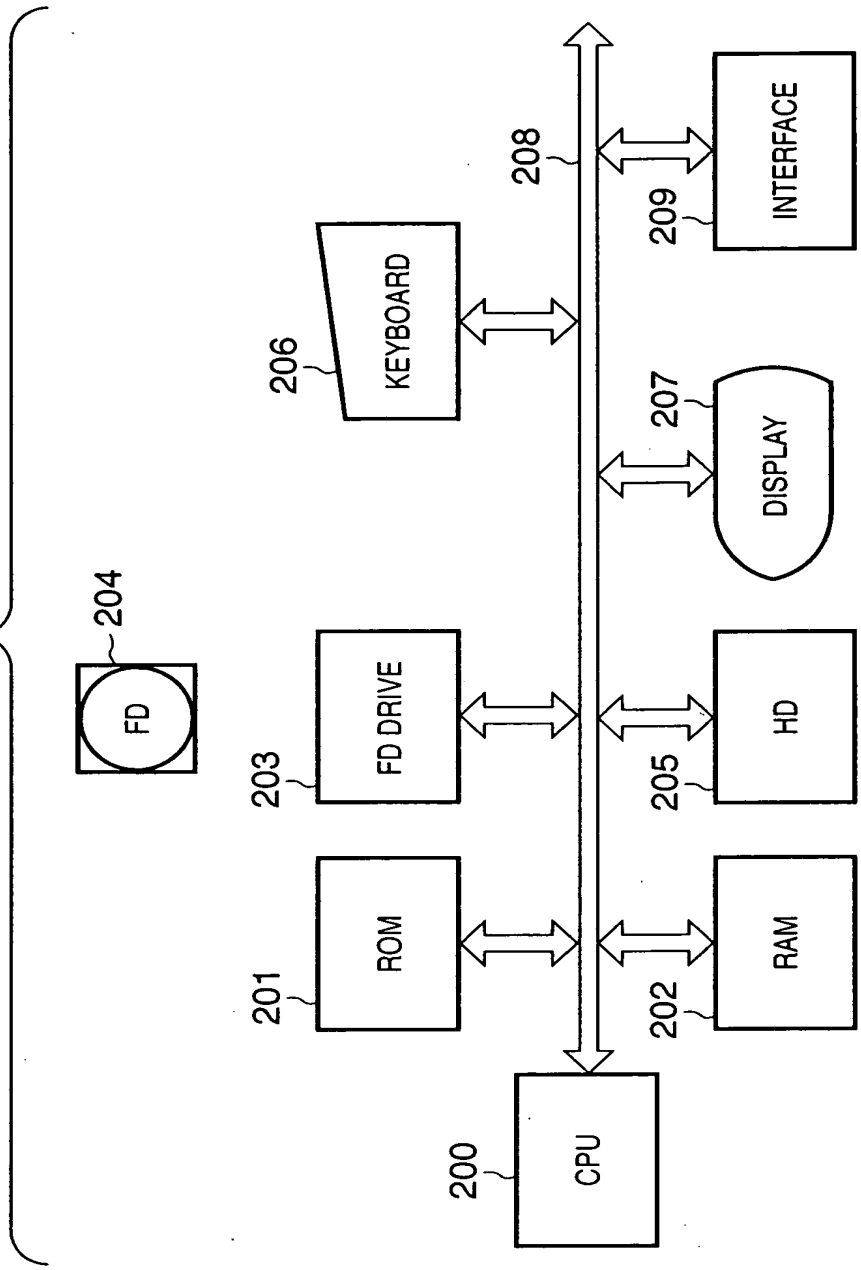

CPU
200
ROM
201
RAM
202
FD DRIVE
203
FD
204
HD
205
KEYBOARD
206
DISPLAY
207
208
INTERFACE
209

FIG. 3

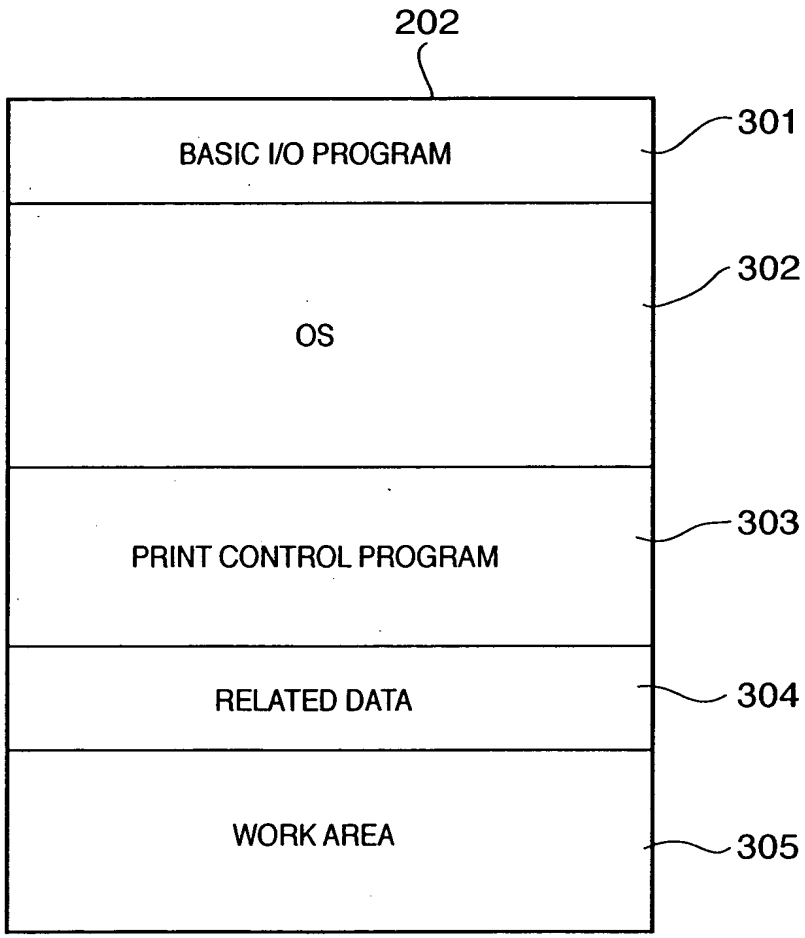

202
BASIC I/O PROGRAM
301
OS
302
PRINT CONTROL PROGRAM
303
RELATED DATA
304
WORK AREA
305

FIG. 4

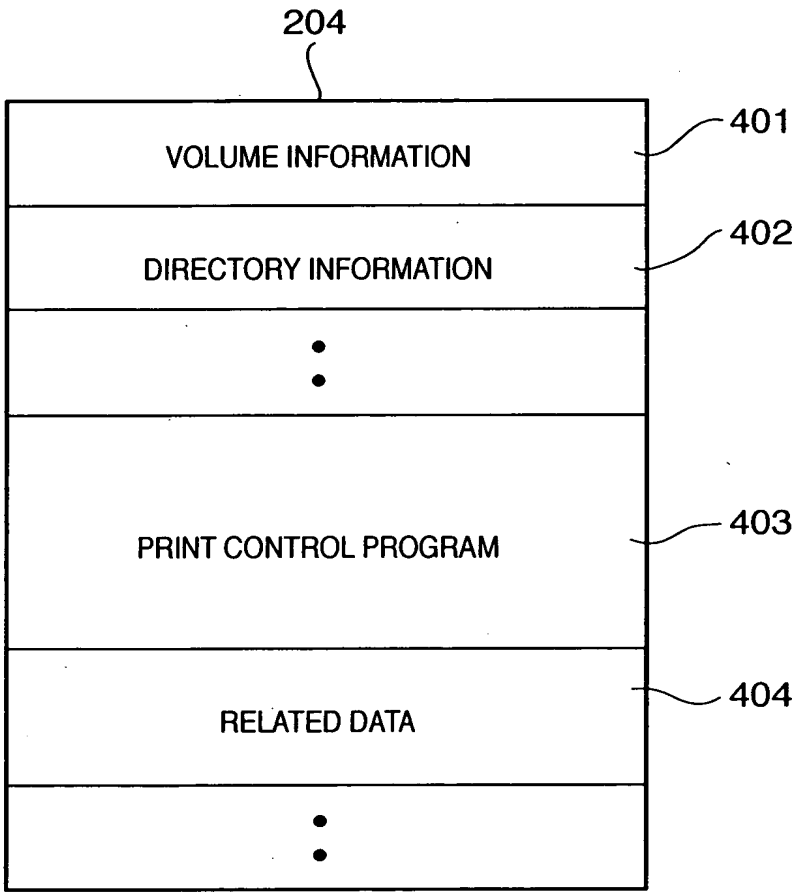

204
VOLUME INFORMATION
401
DIRECTORY INFORMATION
402
PRINT CONTROL PROGRAM
403
RELATED DATA
404

FIG. 5

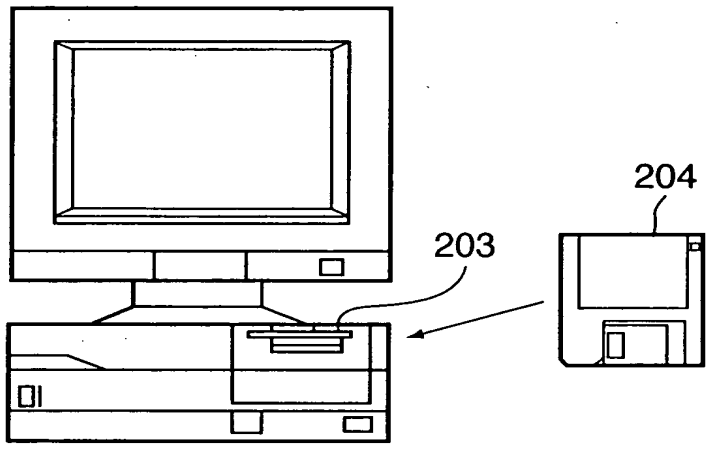


FIG. 6

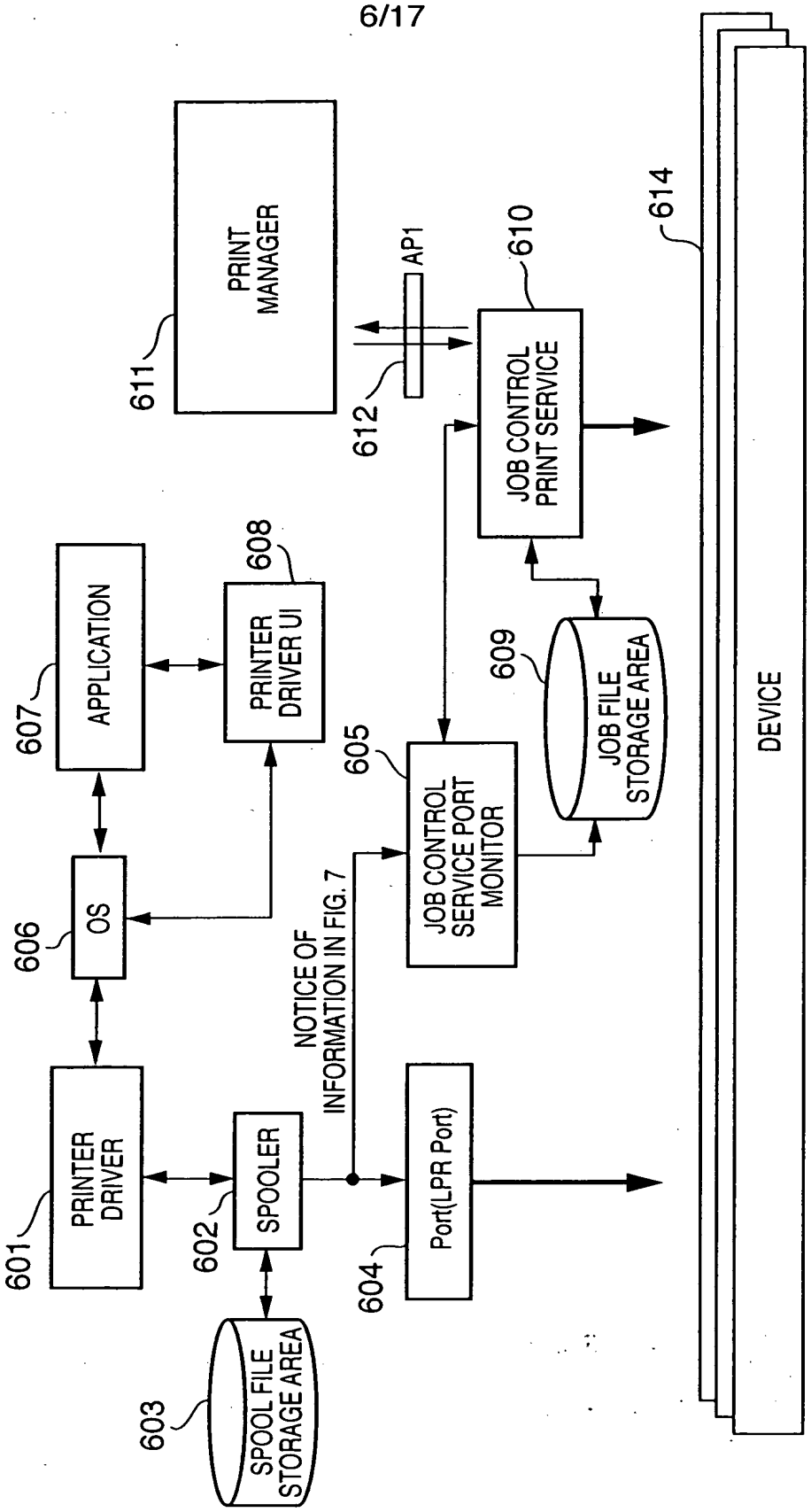

PRINT MANAGER
611
AP1
612
JOB CONTROL PRINT SERVICE
610
614
DEVICE
APPLICATION
607
PRINTER DRIVER UI
608
JOB FILE STORAGE AREA
609
JOB CONTROL SERVICE PORT MONITOR
605
OS
606
NOTICE OF INFORMATION IN FIG. 7
PRINTER DRIVER
601
SPOOLER
602
Port(LPR Port)
604
SPOOL FILE STORAGE AREA
603

FIG. 7

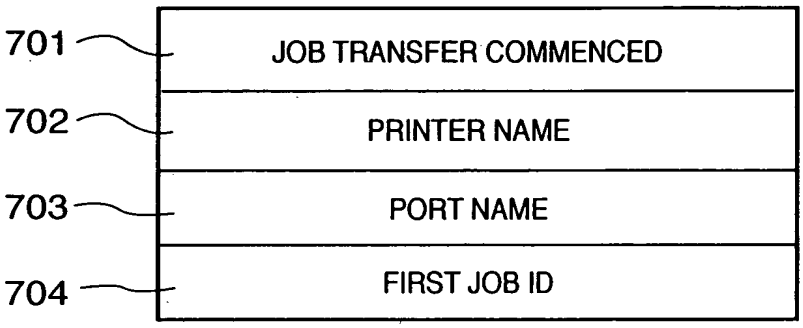

701
JOB TRANSFER COMMENCED
702
PRINTER NAME
703
PORT NAME
704
FIRST JOB ID

FIG. 8

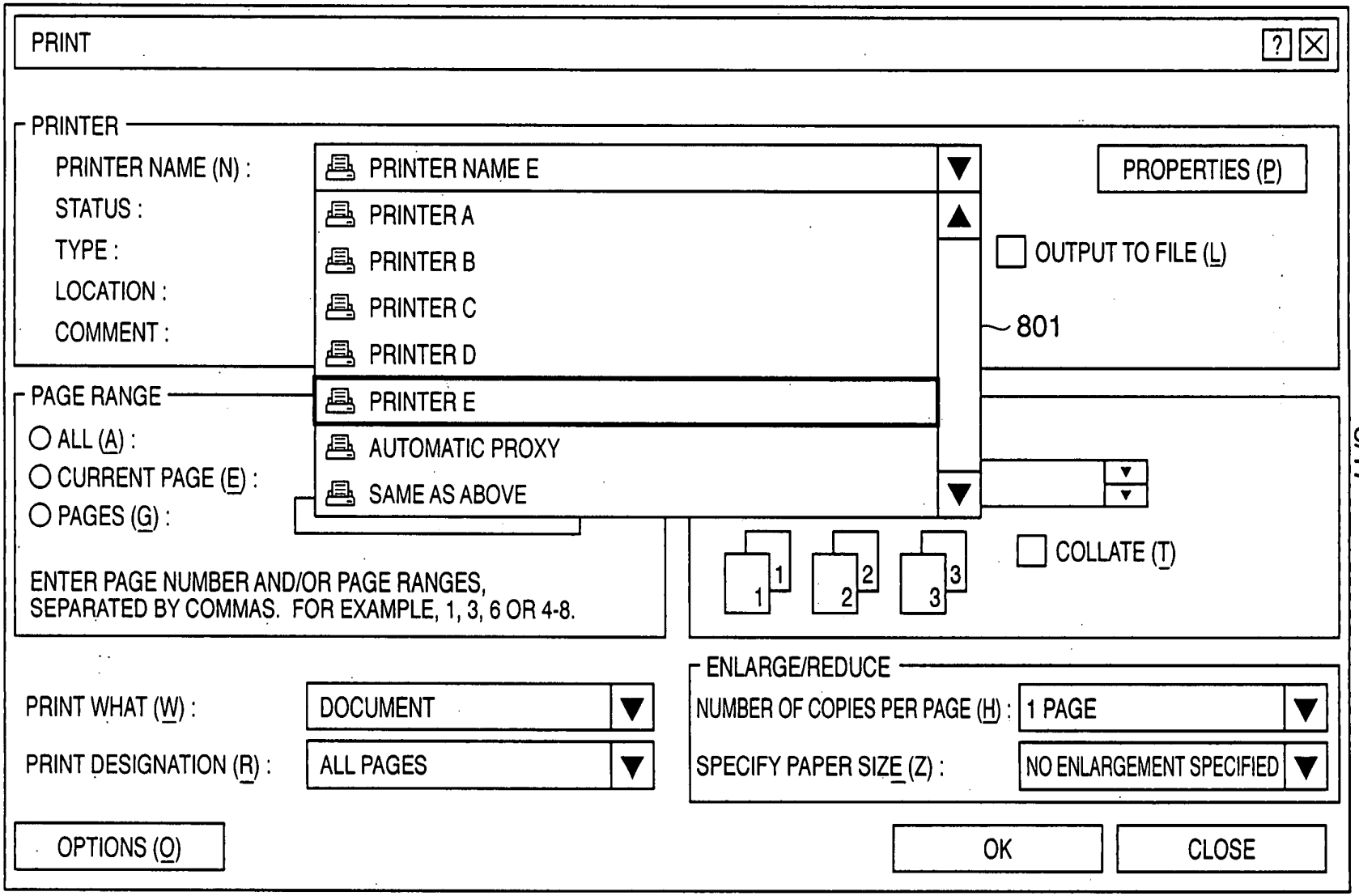

PRINT
PRINTER
PRINTER NAME (N) :
STATUS :
TYPE :
LOCATION :
COMMENT :
PRINTER NAME E
PRINTER A
PRINTER B
PRINTER C
PRINTER D
PRINTER E
AUTOMATIC PROXY
SAME AS ABOVE
PROPERTIES (P)
OUTPUT TO FILE (L)
801
PAGE RANGE
ALL (A) :
CURRENT PAGE (E) :
PAGES (G) :
ENTER PAGE NUMBER AND/OR PAGE RANGES,
SEPARATED BY COMMAS. FOR EXAMPLE, 1, 3, 6 OR 4-8.
COLLATE (T)
PRINT WHAT (W) :
DOCUMENT
PRINT DESIGNATION (R) :
ALL PAGES
ENLARGE/REDUCE
NUMBER OF COPIES PER PAGE (H) :
1 PAGE
SPECIFY PAPER SIZE (Z) :
NO ENLARGEMENT SPECIFIED
OPTIONS (O)
OK
CLOSE

FIG. 9

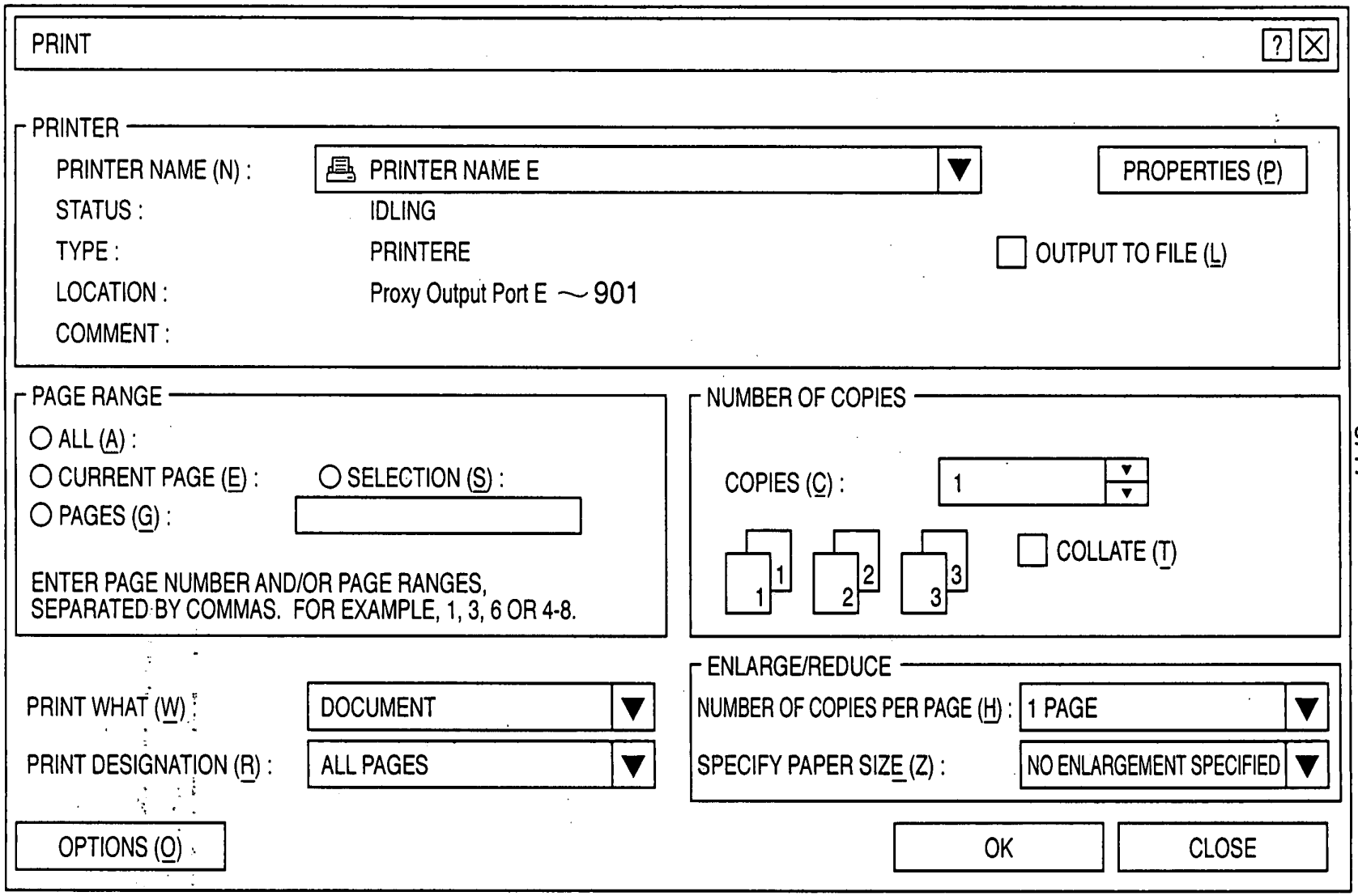

PRINT
PRINTER
PRINTER NAME (N) :
PRINTER NAME E
PROPERTIES (P)
STATUS :
IDLING
TYPE :
PRINTERE
OUTPUT TO FILE (L)
LOCATION :
Proxy Output Port E
901
COMMENT :
PAGE RANGE
ALL (A) :
CURRENT PAGE (E) :
SELECTION (S) :
PAGES (G) :
ENTER PAGE NUMBER AND/OR PAGE RANGES,
SEPARATED BY COMMAS. FOR EXAMPLE, 1, 3, 6 OR 4-8.
NUMBER OF COPIES
COPIES (C) :
1
COLLATE (T)
PRINT WHAT (W) :
DOCUMENT
PRINT DESIGNATION (R) :
ALL PAGES
ENLARGE/REDUCE
NUMBER OF COPIES PER PAGE (H) :
1 PAGE
SPECIFY PAPER SIZE (Z) :
NO ENLARGEMENT SPECIFIED
OPTIONS (O)
OK
CLOSE

FIG. 10

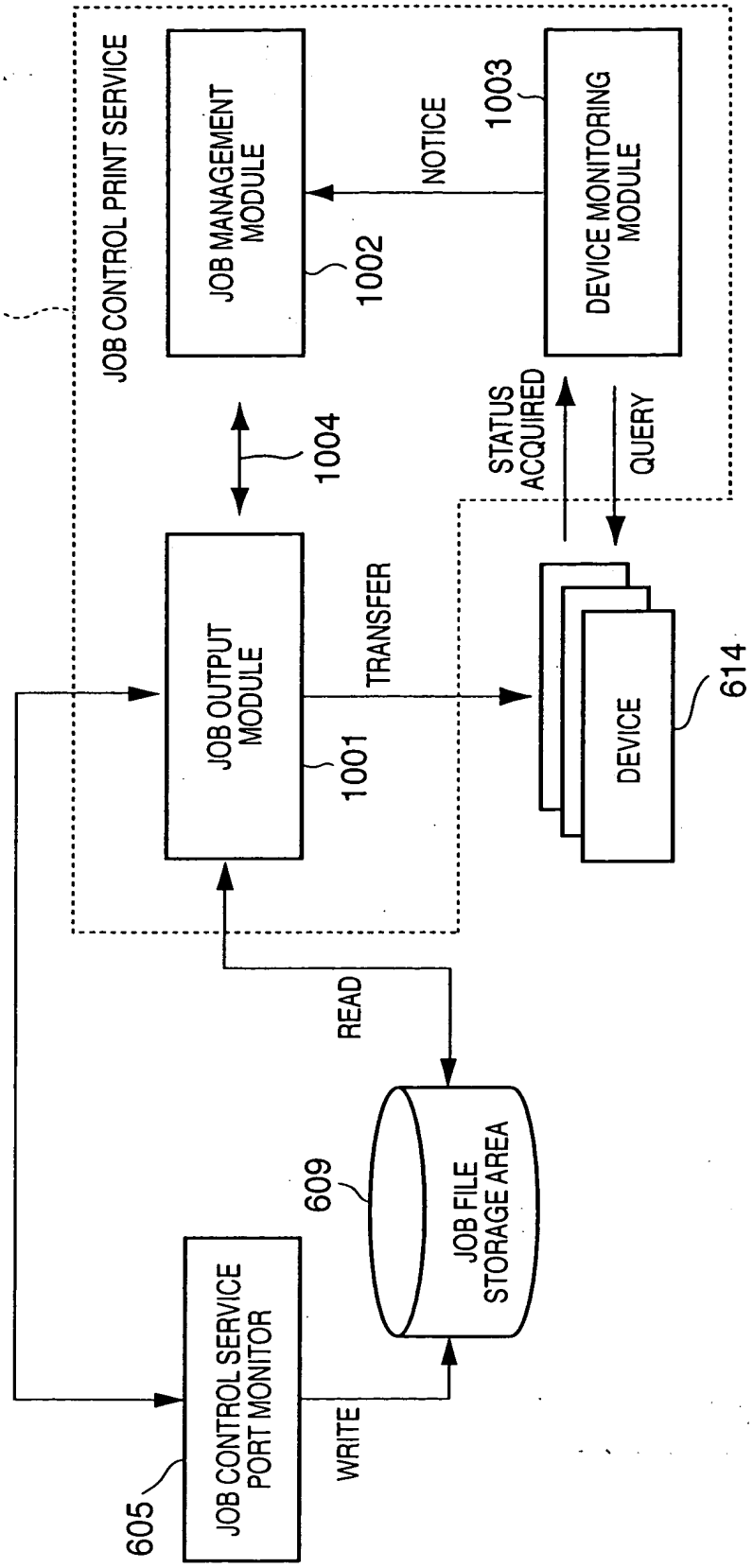

610
JOB CONTROL PRINT SERVICE
JOB MANAGEMENT MODULE
1002
NOTICE
1003
DEVICE MONITORING MODULE
1004
STATUS ACQUIRED
QUERY
JOB OUTPUT MODULE
1001
TRANSFER
DEVICE
614
READ
609
JOB FILE STORAGE AREA
JOB CONTROL SERVICE PORT MONITOR
605
WRITE

FIG. 11

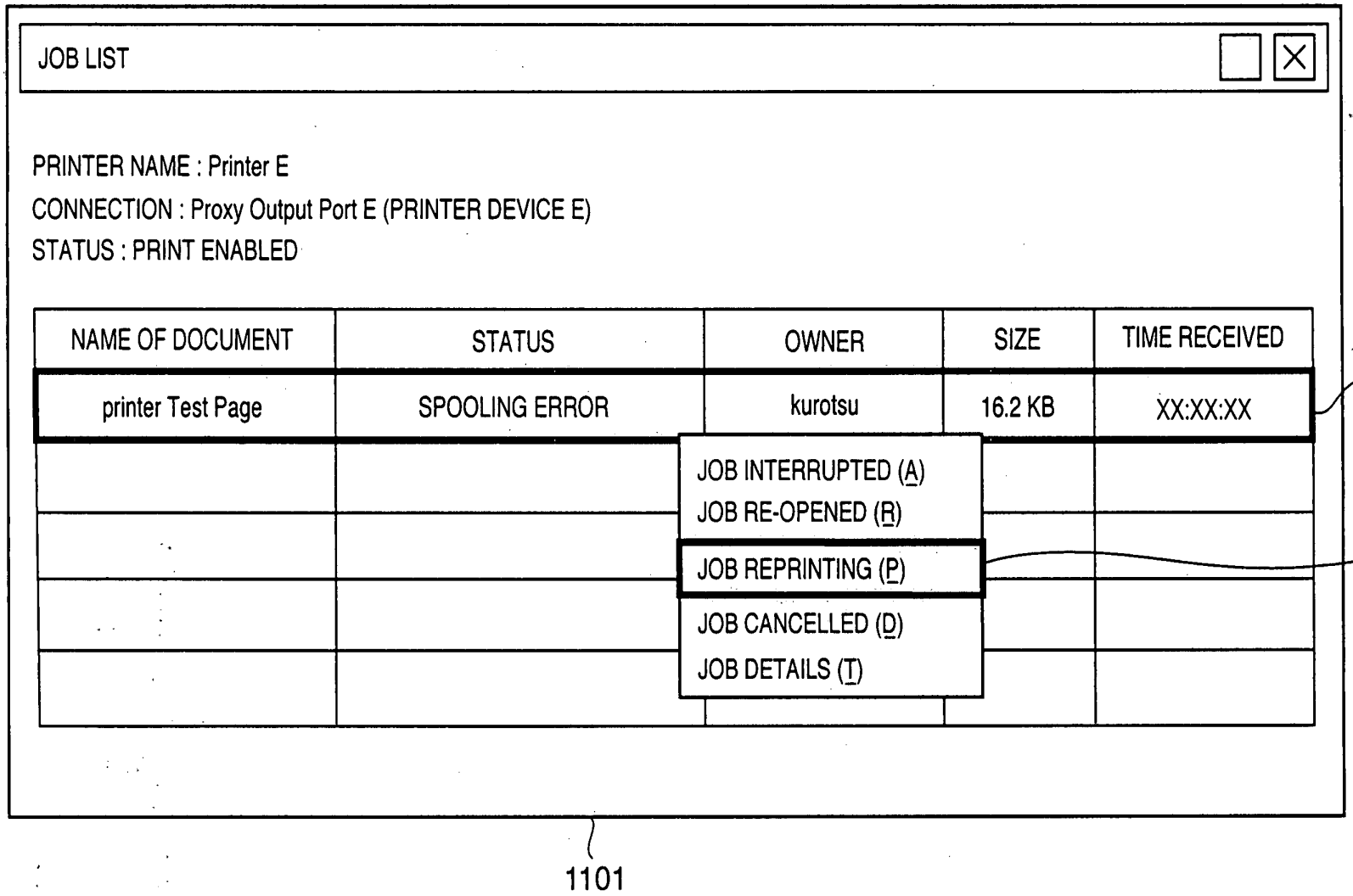

JOB LIST
PRINTER NAME : Printer E
CONNECTION : Proxy Output Port E (PRINTER DEVICE E)
STATUS : PRINT ENABLED
NAME OF DOCUMENT
STATUS
OWNER
SIZE
TIME RECEIVED
printer Test Page
SPOOLING ERROR
kurotsu
16.2 KB
XX:XX:XX
JOB INTERRUPTED (A)
JOB RE-OPENED (R)
JOB REPRINTING (P)
JOB CANCELLED (D)
JOB DETAILS (T)
1102
1103
1101

FIG. 12

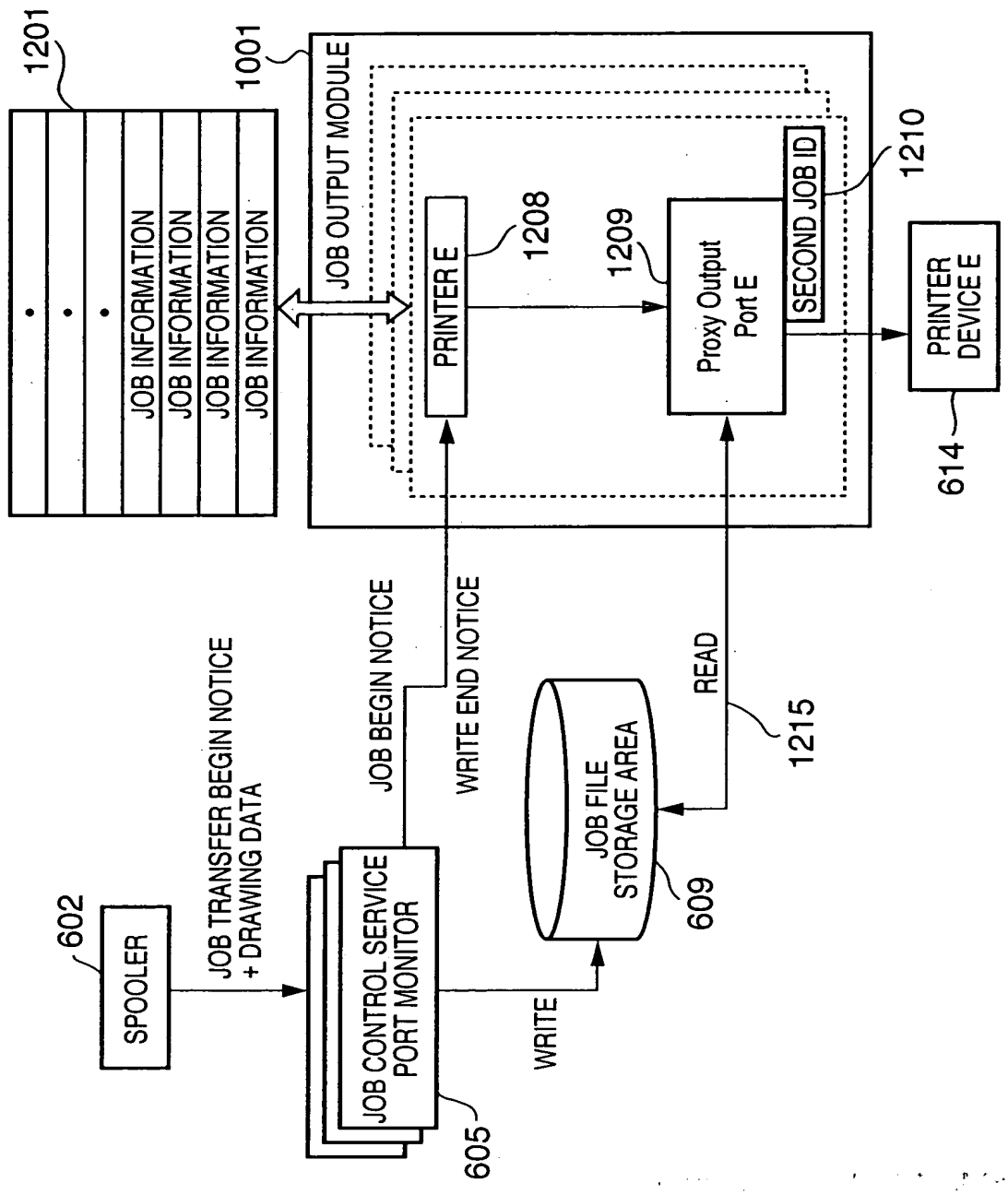

1201
1001
JOB INFORMATION
JOB INFORMATION
JOB INFORMATION
JOB INFORMATION
JOB OUTPUT MODULE
PRINTER E
1208
1209
Proxy Output Port E
SECOND JOB ID
1210
PRINTER DEVICE E
614
JOB BEGIN NOTICE
WRITE END NOTICE
READ
1215
JOB FILE STORAGE AREA
609
602
SPOOLER
JOB TRANSFER BEGIN NOTICE + DRAWING DATA
JOB CONTROL SERVICE PORT MONITOR
605
WRITE

FIG. 13

JOB IDENTIFIER	SECOND JOB ID
ORIGINAL JOB IDENTIFIER	SECOND JOB ID
OS JOB IDENTIFIER	FIRST JOB ID
FILE NAME	FILE A
PRINTER NAME	PRINTER E
PORT NAME	Proxy Output Port E
STATUS	SPOOLING ERROR
TIME RECEIVED	X:X:X
PRIORITY	1
NAME OF DOC	Printer Test Page
SIZE	16.2 KB
OWNER	kurotsu

FIG. 14

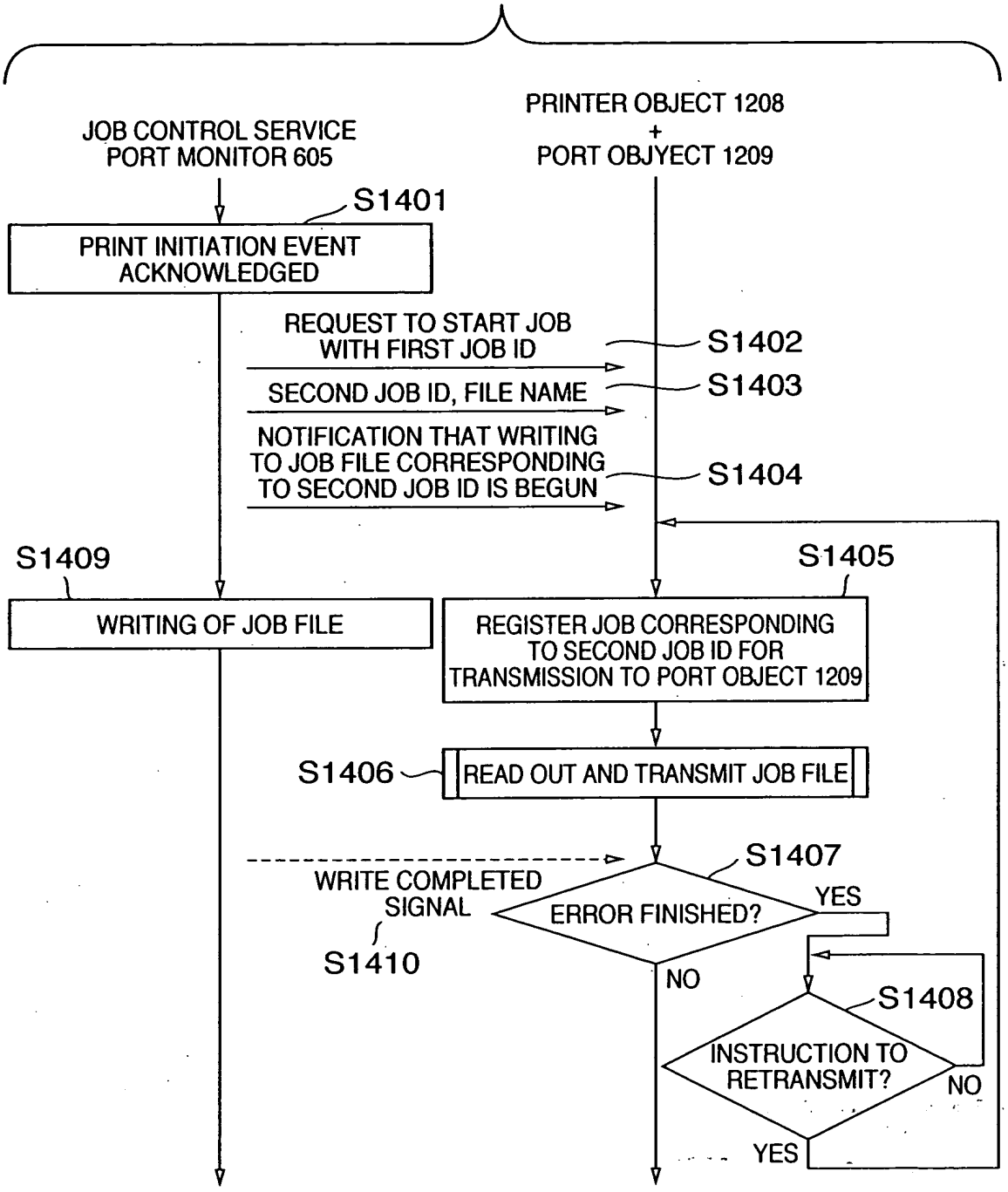

JOB CONTROL SERVICE
PORT MONITOR 605
PRINTER OBJECT 1208
+
PORT OBJYECT 1209
S1401
PRINT INITIATION EVENT ACKNOWLEDGED
REQUEST TO START JOB WITH FIRST JOB ID
S1402
SECOND JOB ID, FILE NAME
S1403
NOTIFICATION THAT WRITING TO JOB FILE CORRESPONDING TO SECOND JOB ID IS BEGUN
S1404
S1409
S1405
WRITING OF JOB FILE
REGISTER JOB CORRESPONDING TO SECOND JOB ID FOR TRANSMISSION TO PORT OBJECT 1209
S1406
READ OUT AND TRANSMIT JOB FILE
S1407
WRITE COMPLETED SIGNAL
S1410
ERROR FINISHED?
YES
NO
S1408
INSTRUCTION TO RETRANSMIT?
NO
YES

FIG. 15

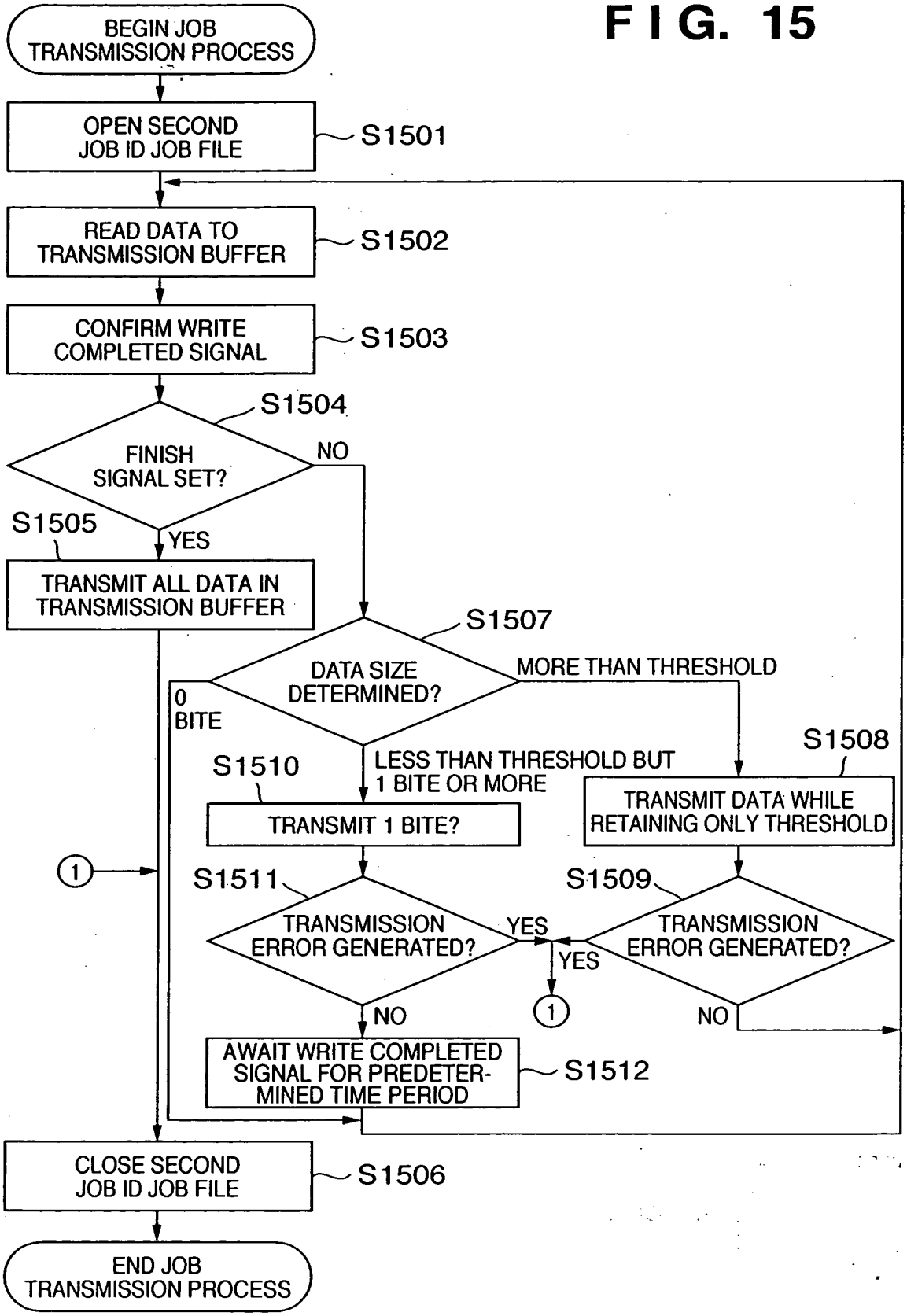

BEGIN JOB TRANSMISSION PROCESS
OPEN SECOND JOB ID JOB FILE
S1501
READ DATA TO TRANSMISSION BUFFER
S1502
CONFIRM WRITE COMPLETED SIGNAL
S1503
S1504
FINISH SIGNAL SET?
NO
S1505
YES
TRANSMIT ALL DATA IN TRANSMISSION BUFFER
S1507
DATA SIZE DETERMINED?
MORE THAN THRESHOLD
0 BITE
S1508
S1510
LESS THAN THRESHOLD BUT 1 BITE OR MORE
TRANSMIT DATA WHILE RETAINING ONLY THRESHOLD
TRANSMIT 1 BITE?
1
S1511
S1509
TRANSMISSION ERROR GENERATED?
YES
TRANSMISSION ERROR GENERATED?
YES
1
NO
NO
AWAIT WRITE COMPLETED SIGNAL FOR PREDETER-MINED TIME PERIOD
S1512
CLOSE SECOND JOB ID JOB FILE
S1506
END JOB TRANSMISSION PROCESS

FIG. 16

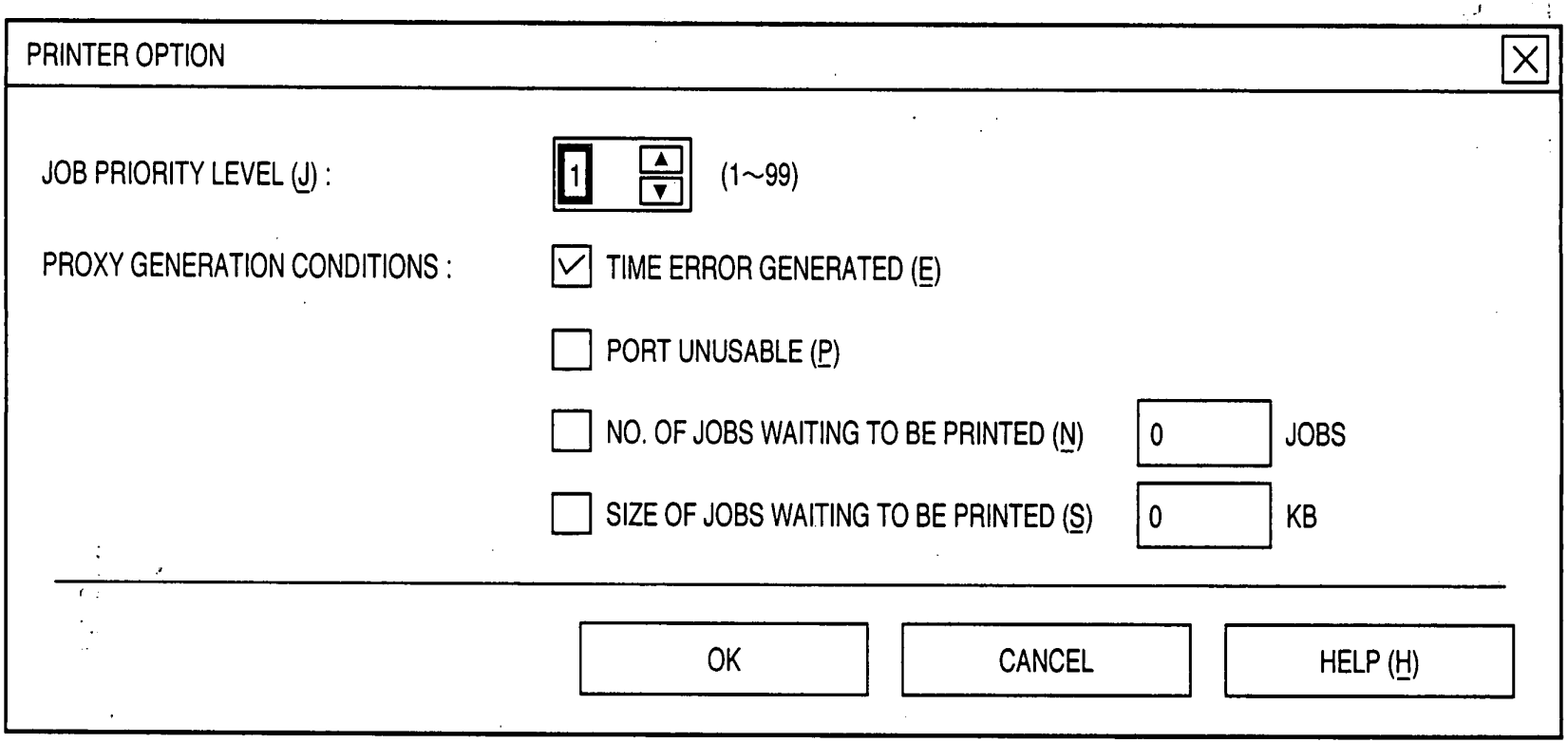
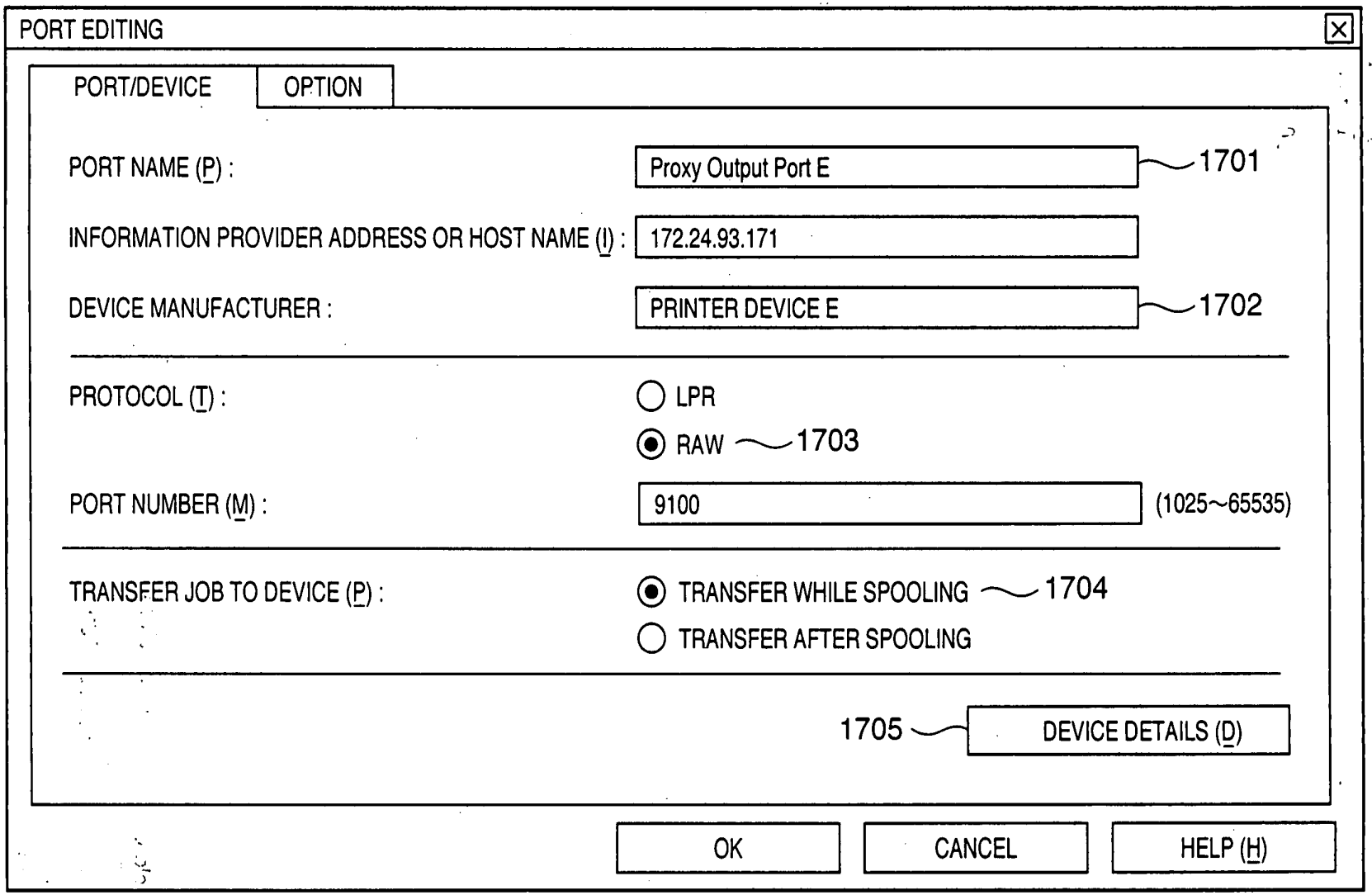

PRINTER OPTION
JOB PRIORITY LEVEL (J) :
1
(1~99)
PROXY GENERATION CONDITIONS :
TIME ERROR GENERATED (E)
PORT UNUSABLE (P)
NO. OF JOBS WAITING TO BE PRINTED (N)
0
JOBS
SIZE OF JOBS WAITING TO BE PRINTED (S)
0
KB
OK
CANCEL
HELP (H)

FIG. 17


PORT EDITING
PORT/DEVICE
OPTION
PORT NAME (P) :
Proxy Output Port E
1701
INFORMATION PROVIDER ADDRESS OR HOST NAME (I) :
172.24.93.171
DEVICE MANUFACTURER :
PRINTER DEVICE E
1702
PROTOCOL (T) :
LPR
RAW
1703
PORT NUMBER (M) :
9100
(1025~65535)
TRANSFER JOB TO DEVICE (P) :
TRANSFER WHILE SPOOLING
1704
TRANSFER AFTER SPOOLING
1705
DEVICE DETAILS (D)
OK
CANCEL
HELP (H)